

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

In the specification, page 14, line 9, page 14, line 22, page 16, lines 5-6 and 15, page 17, lines 10-13 and page 20, line 19 have been amended.

Claims 1-8, 10-11 and 15-18 are currently being amended.

Claim 9 has been canceled without prejudice or disclaimer.

Claims 19-38 are being added. No new matter has been added.

This amendment adds, changes and deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, Claims 1-8 and 10-38 are now pending in this application.

Allowable Subject Matter

Applicant appreciates the indication of allowable subject matter in claims 6 and 10.

Drawings and specification

The Examiner objected to page 14, line 9, and alternately to the drawings, because page 14, line 9 teaches the presence of protrusions 12a, 12b and 13a in FIG. 3 instead of FIG. 4. The specification has been amended to identify the protrusions 12a, 12b and 13a as being in FIG. 4, thus overcoming the objection.

Abstract

The Examiner objected to line 3 of the Abstract because of the use of the word “comprises” as out of compliance with MPEP § 608.01(b). The Abstract has been amended

to replace “comprises” with “includes” thus overcoming the objection. Applicant notes, however, that the amendment to the abstract is in no way an intention to limit the scope of Applicant’s claimed invention.

Rejections under 35 U.S.C. § 102(b)

Claims 1, 6, 9, 11 and 14 were rejected under 35 U.S.C. § 102(b) as being anticipated by Nakagami et al. (U.S. Patent No. 5,532,798) (“Nakagami”). The rejection is respectfully traversed for at least the following reasons.

Claim 1 has been amended to recite:

A charger comprising:

an electrode having a plurality of charging needles and which is a sheet-shaped electric conductor having a first plane including a straight line in an axial direction of an image carrier; and an electrode cleaning mechanism contacting tip ends of the charging needles, and including a sheet section having a second plane arranged perpendicularly to the first plane of the electrode, and a holding member for holding the sheet section along an axial direction of an image carrier an electrode cleaning mechanism contacting tip ends of the charging needles, and including a sheet section having a second plane arranged perpendicularly to the first plane of the electrode, and a holding member for holding the sheet section along an axial direction of an image carrier.

Claim 11 has been amended to recite:

An image forming apparatus comprising:

an image carrier which holds a latent image and a developer image;

a charger including an electrode, an electrode cleaning mechanism and a moving mechanism,

the electrode having a plurality of charging needles and which is a sheet-shaped electric conductor having a first plane including a straight line in an axial direction of an image carrier,

the electrode cleaning mechanism contacting tip ends of the charging needles, and including a sheet section having a second plane arranged perpendicularly to the first plane of the electrode, and a holding member for holding the sheet section along an axial direction of an image carrier, the moving mechanism moving the electrode cleaning mechanism along the electrode;

a development device which supplies a developer to the image carrier to which the predetermined potential is supplied by the charger; and

a transfer device which transfers the developer image formed on the image carrier onto an output medium.

Regarding the Office Action discussion of Claims 1 and 11, Applicant presumes that the Examiner intended to scraping members as “14a-d” instead of “41a-d.”

Regarding Claims 1 and 11, as the Examiner points out, Nakagami discloses scraping members used as cleaning sheets. However, Nakagami describes the cleaning sheets 41a-41d coming into contact with a flat plate 2b of a plate electrode 2. Nakagami teaches that “[t]he scraping members 41a-41d ... make pressure contact with the flat plate 2b ... on the plate electrode 2 ... [and] do not make contact with the protrusions 2a of the plate electrode.” (Col. 10, lines 24-32; FIG. 13(b), elements 41b and 41c in relation to element 2; and FIG. 13(c), element 2 in relation to element 2a). Nakagami illustrates the protrusions 2a disposed as the region on the electrode comprised of pointed tips.

Nakagami does not disclose the cleaning sheets 41a-41d contacting the protrusions 2a while claims 1 and 14 recite the cleaning sheets coming into contact with the tips of the charging needles of the electrode. Claims 1 and 11 are patentable over Nakagami for at the this reason.

Accordingly, reconsideration and withdrawal of the rejections of Claims 1 and Claim 11 is respectfully requested for at least the foregoing reasons. The claims that depend from Claims 1 and 11 are also allowable for at least the same reasons as Claim 1 and Claim 11. Accordingly, reconsideration and withdrawal of the rejection of Claim 1 and its dependent Claim 6 is respectfully requested. Further, reconsideration and withdrawal of the rejection of Claim 11 and its dependent Claim 14 is respectfully requested.

Rejections under § 103(a)

Claims 2, 3, 8 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagami in view of Nakaoka et al. (U.S. Patent No. 4,788,573) (“Nakaoka”). Applicant respectfully traverses the rejection for at least the following reasons. Claims 2, 3 and 8 depend from Claim 1 and, as such, are patentable for at least the reasons presented above with regard to Claim 1. Claim 15 depends from Claim 11 and, as such, is patentable for at least the reasons presented with regard to Claim 11.

Claims 4 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagami in view of Sato et al. (U.S. Patent No. 5,946,529) (“Sato”). Applicant respectfully traverses the rejection for at least the following reasons. Claims 4 and 5 depend from Claim 1 and, as such, are patentable for at least the reasons presented above with regard to Claim 1.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagami in view of Hensel (U.S. Patent No. 5,940,656) (“Hensel”). Applicant respectfully traverses the rejection for at least the following reasons. Claim 7 depends from Claim 1 and, as such, is patentable for at least the reasons presented above with regard to Claim 1.

Claims 12, 16 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagami in view of Tashiro et al. (U.S. Patent No. 6,415,120) (“Tashiro”). Applicant respectfully traverses the rejection for at least the following reasons. Claims 12, 16 and 18 depend from Claim 11 and, as such, are patentable for at least the reasons presented above with regard to Claim 11.

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagami in view of Kawamura (U.S. Patent Application Publication No. 2003/0194249) (“Kawamura”). Applicant respectfully traverses the rejection for at least the following reasons. Claim 13 depends from Claim 11 and, as such, is patentable for at least the reasons presented above with regard to Claim 11.

Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagami in view of Tashiro as applied to claim 12 above, and further in view of Hensel. Claim 17 depends from Claim 11 and, as such, is patentable for at least the reasons presented above with regard to Claim 11.

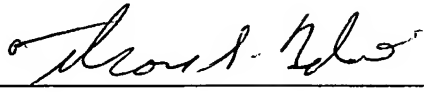
Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By 

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